



# All About Eggs!

## Lesson Overview

**Time:** 10-20 Minutes

### Learning Objectives:

In this Lesson, participants will:

- Identify safe cooking practices and precautions for eggs and egg dishes.
- Explain why a thermometer should be used instead of visual cues to check for doneness of egg dishes.
- Practice using a food thermometer on egg dishes.

### Tennessee Department of Education Academic Standards

- Health Education Standards 3-5: 2.1; 2.3; 9.1; 9.3; 9.4
- Science Education Standards 5: 0507.Inq.1, 0507.Inq.2, 0507.Inq.4

### Contents:

- **Handout & Activity Page:** Overview of key points and puzzle activity
- **Check For Understanding Review:** Review of key points

### Materials:

- Printed Handout & Activity Page for each participant
- Printed Check For Understanding Review for each participant
- Visual (PowerPoints, Easel, etc.)

## Subject Matter Outline

### Be Careful with Eggs Too!

- Eggs are a staple in many dishes and meals. Because they can carry harmful bacteria that causes us to become ill, it is very important we follow food safety precautions to prevent us from becoming sick when cooking with and preparing eggs.

## Subject Matter Outline

### Vocabulary

- **Casserole:** A dish cooked in an oven containing multiple ingredients
- **Egg Dish:** Any recipe containing eggs (Examples: Casseroles, Quiches, Pies)
- **Danger Zone:** Between 40°F and 140°F
- **Doneness:** The degree of how completely cooked a dish is
- **Food Thermometer:** Special thermometer used to measure the temperature of food
- **Calibrate:** To adjust
- **Salmonella:** Bacteria that can be found in eggs and cause illness

### No More Runny Eggs!

- Cook eggs until both the yolks and the whites are firm. Runny eggs are still undercooked and could potentially make you sick.
- Scrambled eggs should not be runny.
- You can use a thermometer to determine doneness of scrambled eggs too! (to 160°F)
- Never consume raw or undercooked eggs! This includes most cookie doughs and cake/brownie batters.
- You can buy pasteurized eggs to use when making homemade recipes (like ice cream!) for a safer alternative! Much like milk is pasteurized to make it safe to drink, these eggs have been heat treated in the shell to eliminate harmful bacteria.

### Thermometers

- Doneness: completely cooked.
- When making quiche, pies, casseroles, or other dishes that contain eggs, use a thermometer to check the doneness of the product.
- These dishes should be cooked to 160°F.
- Never rely on visual cues or toothpicks to determine if an egg dish is done. This can be misleading.
- Calibrate: Make sure the thermometer is reading the correct temperatures. Make sure to read the directions that come with the thermometer to calibrate correctly. You can check for the accuracy of the thermometer by boiling a pot of water. The temperature should read 212°F.
- Insert the thermometer into the middle of the egg dish (should be 160°F or higher).

### Safe Cooking & Reminders

- You should always begin meal preparation with a clean environment & utensils. This includes counter tops & surfaces, cutting boards, knives, dishes and plates, etc. *For more information on cleaning your kitchen, refer to Lesson 2: "Clean It! Make It Safe!"*
- You should wash your hands often when preparing and handling eggs. Wash your hands **before and after** cracking an egg. *For more information on Hand washing, refer to Lesson 1: "Hand Washing: Leave No Germ Behind."*
- Do not reuse any plate, bowl, surface or utensil that has held uncooked or raw eggs without properly washing them. *For more information on cleaning your kitchen, refer to Lesson 2: "Clean It! Make It Safe!"*

## Teaching Guide

### Interest Approach:

- **Discussion** Ask students “How many of you have ever eaten a runny egg or snuck a bite of cookie dough? Why are these things bad? Why is egg safety important?”
- **Explain** “Eggs are a staple in many dishes and meals. Because they can carry harmful bacteria that causes us to become ill, it is very important we follow food safety precautions to prevent us from becoming sick when cooking with and preparing eggs.”
- Briefly review this lesson’s vocabulary in the *Subject Matter Outline*

### Objective 1. Identify safe cooking practices and precautions of eggs and egg dishes.

- Using the PowerPoint for this lesson as a visual (or other method), **present** the recommended safety practices provided in **No More Runny Eggs** section in the *Subject Matter Outline*.
- **Explain** “Runny eggs and cookie dough contain undercooked eggs. Consuming raw or undercooked eggs can put us at risk of becoming sick.” Refer to the vocabulary definition of Salmonella.

### Objective 2. Explain why thermometer use instead of visual cues to check for doneness is safer.

- **Discussion** Ask students how often they (or their parents) use thermometers to check the temperature of egg dishes (refer to the vocabulary definition of egg dish). Ask students how often they notice visual cues being used instead of thermometers in recipes. Examples of visual cues would be firmness, liquefied, gelatinous, etc.
- Using the PowerPoints (or other visual), explain why thermometer use is necessary.
- Lead students through *Activity 1: Recipe Hunt*

### Objective 3. Practice using a food thermometer on egg dishes.

- Lead students through *Activity 2: Cooking Lab* for practice using food thermometers on eggs.

### Review:

- a. **Evaluate** with the *Check For Understanding* worksheet
- b. Give each student a copy of the *All About Eggs* Handout to take home.

### Answers to word puzzle:

- Cook eggs until both the yolks and the whites are firm
- The only way to determine doneness is with a thermometer
- Wash your hands before and after cracking an egg

Activity Guide	
Outline	Key Points
<p><b><u>Activity 1: Recipe Hunt</u></b></p> <ul style="list-style-type: none"> <li>• Let students work in pairs (or alone).</li> <li>• Ask them to look up 5-10 recipes of egg dishes (quiches, casseroles, pies).</li> <li>• They can search for these recipes online or in a cookbook (if you have a cookbook).</li> <li>• Have the students take note of how the recipe talks about “doneness.” Does it give visual cues, a temperature, etc.?</li> <li>• Have the students determine what recipes are safe and unsafe based on how they tell the consumer to check for doneness.</li> <li>• Have the students re-write the recipes (just the doneness part) to incorporate using a thermometer to safely check if the dish is done.</li> <li>• Have students share their results and recipes with the group.</li> </ul>	<p><b><u>Recipe Hunt</u></b></p> <p>This activity will show how many recipes in cookbooks and online fail to tell the consumer to use or how to use a thermometer. Most recipes rely on visual cues or toothpicks to determine doneness.</p>

Activity Guide	
Outline	Key Points
<p><b>Activity 2: <u>Cooking Lab</u></b></p> <ul style="list-style-type: none"> <li>Decide on two to four egg based dishes (quiche, casseroles, etc.) that take approximately 20-30 minutes to bake and have ingredients ready and measured.</li> <li>Divide students into pairs or groups and assign each group or pair an egg dish.</li> <li>Let the students prepare the egg dish following the recipes given.</li> <li>Have the students use the visual cues given in the recipe to determine the “doneness” of the dish. Then have them take the temperature of the dish to determine if it is really “done.” Some dishes may need to be cooked longer.</li> <li>Compare the results of the experiment. Discuss and review the importance of using a thermometer vs. visual cues.</li> <li><b>*Can continue on to another lesson or activity while egg dishes are cooking.*</b></li> <li><b>*Make sure all dishes are prepared safely and are completely done before consuming (if you plan on students consuming them)</b></li> </ul>	<p><b><u>Cooking Lab</u></b></p> <p>This activity will show that doneness can only be determined properly by using a thermometer. Some of the dishes may not be cooked completely when only relying on color or a toothpick to determine doneness.</p> <p><b>*Can continue on to another lesson or activity while egg dishes are cooking.*</b></p> <p><b>*Make sure all dishes are prepared safely and are completely done before consuming (if you plan on students consuming them).</b></p>
References	
<p><b>Educational Resources:</b></p> <p>Academic Standards. (2016). <a href="https://www.tn.gov/education/topic/academic-standards">https://www.tn.gov/education/topic/academic-standards</a></p> <p>Educational Materials On Food Safety. <a href="http://fightc-les.org/">http://fightc-les.org/</a></p> <p>Fight Bac! - Partnership for Food Safety Education. (2016). <a href="http://www.fightbac.org/">http://www.fightbac.org/</a></p> <p><b>Handout Puzzle Created By:</b></p> <p>Discovery Education Puzzle Maker. (2016). <a href="http://www.discoveryeducation.com/free-puzzlemaker/index.cfm?campaign=flyout_teachers_puzzle">http://www.discoveryeducation.com/free-puzzlemaker/index.cfm?campaign=flyout_teachers_puzzle</a></p>	

# All About Eggs!



## How does this relate to Poultry and Egg Safety?

Eggs are a staple in many dishes and meals. Because they can contain harmful bacteria that causes us to become ill, it is very important that we follow food safety precautions to prevent us from becoming sick when cooking with and preparing eggs.

## To uncover some important tips on egg safety, solve the three word puzzles below!

A	B	C	D	E	F	G	H	I	J	K	L	M
20	15	13	7	4	22	11	1	12	9	2	17	25

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
8	6	14	24	5	21	23	10	26	3	19	18	16

$\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad}$   
 13 6 6 2    4 11 11 21    10 8 23 12 17    15 6 23 1    23 1 4

$\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad}$   
 18 6 17 2 21    20 8 7    23 1 4    3 1 12 23 4 21

$\overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$   
 20 5 4    22 12 5 25

$\overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$   
 23 1 4    6 8 17 18    3 20 18    23 6    7 4 23 4 5 25 12 8 4

$\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$   
 7 6 8 4 8 4 21 21    12 21    3 12 23 1    20    23 1 4 5 25 6 25 4 23 4 5

$\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad}$   
 3 20 21 1    18 6 10 5    1 20 8 7 21    15 4 22 6 5 4    20 8 7

$\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad}$      $\overline{\quad} \overline{\quad} \overline{\quad}$   
 20 22 23 4 5    13 5 20 13 2 12 8 11    20 8    4 11 11



# All About Eggs!

## Fill in the blank:

- \_\_\_\_\_ is the bacteria that can often be found in eggs that makes us sick.
- You should never consumer \_\_\_\_\_ or \_\_\_\_\_ eggs.
- Cook eggs until both the \_\_\_\_\_ and \_\_\_\_\_ are firm.
- Egg dishes should be cooked to the temperature of \_\_\_\_\_.
- You should wash your hands \_\_\_\_\_ and \_\_\_\_\_ cracking an egg.
- \_\_\_\_\_ is the degree to which a dish is cooked.

## Short Answer:

- What are some ways recipes often incorrectly tell us to measure doneness of dishes?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- What is one thing you can do to enjoy “raw” eggs in recipes such as, cookie dough, ice cream and milk shakes?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# All About Eggs!

## Fill in the blank:

- Salmonella is the bacteria that can often be found in eggs that makes us sick.
- You should never consume runny or undercooked eggs.
- Cook eggs until both the egg white and yolk are firm.
- Egg dishes should be cooked to the temperature of 160 °F.
- You should wash your hands before and after cracking an egg.
- Doneness is the degree to which a dish is cooked.

## Short Answer:

- What are some ways recipes often incorrectly tell us to measure doneness of dishes?
  - Visual cues
  - Smell
  - Color
  - Clean fork or toothpick
  - Timer
- What is one thing you can do to enjoy “raw” eggs in recipes such as, cookie dough, ice cream and milk shakes?
  - Buy pasteurized eggs